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BUT

WHAT IS CLAIMED IS:

1 1. A shoe construction for a shoe, comprising:  
2 a sole having a naturally contoured shape defined by a design  
3 which conforms to the natural shape of the unloaded foot wherein  
4 the theoretically ideal stability plane is determined by the  
5 desired shoe sole thickness and by the natural shape of a foot  
6 surface of the individual, said theoretically ideal stability plane  
7 being defined at an edge of the shoe by the desired shoe sole  
8 thickness in a frontal plane cross section, said shoe sole  
9 thickness increasing beyond the theoretically ideal stability plane  
10 to increase stability beyond its natural level.

1 2. The shoe sole construction as set forth in claim 1 wherein  
2 the thickness of the sole at least at one of the opposed edges of  
3 said sole is thicker at the portions of the sole by a thickness  
4 which gradually varies continuously from a first thickness through  
5 at least an additional thickness.

1 3. The shoe sole construction as set forth in claim 1 wherein  
2 the thickness of the sole gradually varies so that at least a  
3 portion of said sole has a thickness which is greater than the  
4 thickness predicted by the theoretically ideal stability plane.

1 4. The shoe sole construction as set forth in claim 1 wherein  
2 the shoe sole is made from a material or materials which deform  
3 when the shoe is worn thus naturally closely paralleling the  
4 natural deformation of the bare foot under load.

1 5. The shoe sole construction as set forth in claim 1 wherein  
2 the shoe sole thickness varies in a frontal plane cross section.

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1 6. The shoe sole construction as set forth in claim 1,  
2 wherein said shoe sole thickness increases beyond the theoretically  
3 ideal stability plane in order to provide greater than natural  
4 stability.

1 7. The shoe sole construction as set forth in claim 1,  
2 wherein said shoe sole thickness increases beyond the theoretically  
3 ideal stability plane in such a manner that there are  
4 proportionately equal increases to the theoretically ideal  
5 stability plane from the front of the shoe sole to its back.

1 8. The shoe sole construction as set forth in claim 1 wherein  
2 said shoe sole thickness increases beyond the theoretically ideal  
3 stability plane in such a manner that the thickness varies from  
4 one frontal plane cross section to another.

1 9. The shoe sole construction as set forth in claim 2 wherein  
2 variations in the increased thickness of the sole are determined  
3 empirically.

1 10. The shoe sole construction as set forth in claim 2  
2 wherein said thickness variations are symmetrical as between  
3 lateral and medial sides of said shoe.

1 11. The shoe sole construction as set forth in claim 2  
2 wherein said thickness variations are asymmetrical as between  
3 lateral and medial sides of said shoe.

1 12. The shoe sole construction as set forth in claim 2  
2 wherein said thickness variations begin beneath the heel of the  
3 wearer.

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1 13. The shoe sole construction as set forth in claim 2  
2 wherein said thickness variations begin at a point beneath the heel  
3 of the wearer, so that the theoretical ideal stability plane is  
4 determined by the least thickness in the load-bearing portion of  
5 the shoe sole.

1 14. The shoe sole construction as set forth in claim 2  
2 wherein said thickness variations increase then decrease along said  
3 outer sole contour in a frontal plane cross section.

1 15. A shoe sole construction for a shoe, comprising:  
2 a sole having a naturally contoured shape defined by a design  
3 which conforms to the natural shape of the unloaded foot wherein  
4 the theoretically ideal stability plane is determined by the  
5 desired shoe sole thickness which is normally constant in a frontal  
6 plane cross section, said sole including a midsole having a density  
7 variation to approximate a greater than natural stability, said  
8 midsole having material of greater density nearer to the edge of  
9 the shoe sole and material of lesser density nearer to the center  
10 line of the shoe sole.

1 16. The shoe as set forth in claim 15 wherein material of  
2 least density is located beneath the heel of a wearer and material  
3 of greater density is located adjacent said material of least  
4 density.

1 17. The shoe as set forth in claim 15 wherein said sole has  
2 a portion which extends beyond the theoretically ideal stability  
3 plane.

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1 18. The shoe as set forth in claim 15 wherein said density  
2 variation is provided by variations in the bottom sole tread.

1 19. A shoe construction comprising,  
2 a shoe sole having opposed stability quadrant portions  
3 at opposed edges of said sole, said quadrants portions having an  
4 outer edge which is defined by a radius quarter than a radius  
5 defining a theoretically ideal stability plane.

1 20. A shoe construction for a shoe, comprising:  
2 a sole having a naturally contoured shape defined by a design  
3 which conforms to the natural shape of the unloaded foot wherein  
4 the theoretically ideal stability plane is determined by the  
5 desired shoe sole thickness and by the natural shape of a foot  
6 surface of the individual, said theoretically ideal stability plane  
7 being defined at an edge of the shoe by the desired shoe sole  
8 thickness in a frontal plane cross section, said shoe sole  
9 thickness decreasing from the theoretically ideal stability plane  
10 to increase foot motion beyond its natural level.